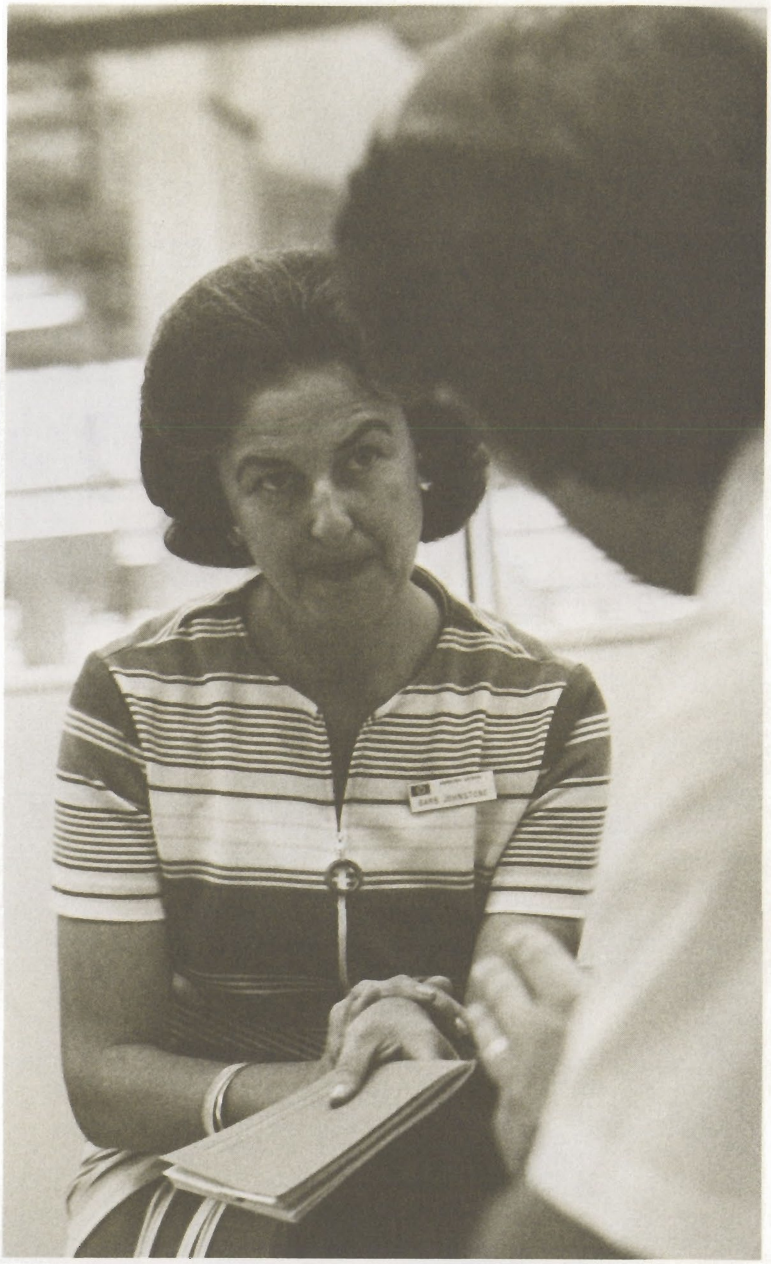
Measure

For the men and women of Hewlett-Packard
AUGUST-SEPTEMBER 1973

The HP experience

Maybe you are an old timer around Hewlett-Packard and have forgotten what it was in the first place that gave you the idea you'd like to work here. Or maybe you're one of the 13,000 to 14,000 people—more than one out of every two persons on the payroll worldwide—who have joined the company during the 18-month period ending July 31, and you're not quite sure if all those things you were told about the company could be true.

However, you are aware—or were told—that HP is "different." But how do you put your finger on that, or spell it out for someone else? With some anecdotes? A recitation of the Corporate Objectives? Or a review of the fringe-benefits package?



Barb Johnstone can tell you why your company is different. At the main Cupertino plant, she has that unique HP job of "housemother," a job that puts her in close touch with many of the personal problems that people bring to their workplace. In fact, Barb herself is one reason why HP is different.

And so can Marty Salisbury. When he joined HP at San Diego about five years ago Marty was a loner, a maverick machinist who thought management was out to "get" him. Today, Marty is out to get into management, thanks to some grass-roots application of a philosophy that gives people a chance to prove themselves.

These experiences of Barb and Marty, representing as they do the actual functioning or effects of a management philosophy and style on an individual employee, are far from unusual in Hewlett-Packard. For HP is preeminently a company that believes in people—that believes in giving people the freedom, the challenge and the opportunity to set their own objectives and to meet those objectives in their own way. Often, it's called "the HP way," or more formally as "management by objective." How it came about, how it functions on a day-to-day basis, and what its prospects are in the face of future growth are told by HP people themselves in the following mosaic of recollections, experiences and views . . .

(continued)

Frederick E. Terman

The HP experience

YESTERDAY

"I FIRST BECAME ACQUAINTED WITH DAVE Packard back in the fall of 1933 when he was a senior at Stanford. Dave wanted to enroll in an electronics course I was teaching that was really for graduate students. However, I let him in because he had had very good grades and had had experience as a radio 'ham'. As a result, I also got slightly acquainted with Bill Hewlett during that year, although he didn't take this course until the following year. During this period I learned that they were very good friends, and that they had a dream of someday going into business together—some kind of business that would be electrical and technical, though not necessarily electronics."

Speaking was Fred Terman, Vice President and Provost Emeritus of Stanford University, and Director Emeritus of Hewlett-Packard Company. Professor Terman had been asked by MEASURE to recall some of the events and circumstances leading to the founding of the company and to its direction and character:

"As a ham radio operator, Packard had built radio equipment and it was this background that oriented him toward radio. How Hewlett happened to choose electrical engineering I don't know. His father (then deceased) had been a distinguished professor of internal medicine in the Stanford Medical School; even then Bill had an interest in medical electronics as evidenced by the fact that while a student at Stanford he built a diathermy machine as well as apparatus to record brain waves.

"It was my impression that as a boy Bill had not previously worked much with mechanical things or made things with his own hands. At Stanford we had a small student shop in the radio laboratory, and Bill got to playing around in this shop during his graduate years. He was an unusually energetic fellow, who always had to be doing something extra to wear off his surplus steam, even while taking a full academic load. And he did this by making things in the shop. When he got something made and working, that was it, and he would quickly lose interest. For example, he was one of the early skiers, and he built himself

a portable transceiver that worked off of batteries—to carry out on the ski range. He enjoyed making it, and took it out on one or two trips, but soon it was taken apart and the parts used for something else. He got his real satisfaction from making it and getting it to work.

"As I have said, my impression was that Bill hadn't done much of this before, and was finding that making things was a lot of fun. At the beginning he wasn't particularly skillful in either design or construction. I have said that he alone could create more disorder in the shop in one afternoon than all of the other fellows put together would create in a week. I know he hadn't done much in radio before, because he used to take circuit diagrams from the magazine QST, and go over them laboriously in great detail. I can remember once he looked up with a broad smile and said to me with obvious satisfaction, 'Well, I just finished studying this diagram, and I've figured out what every component in it is supposed to be doing.'

"In this period, when he was first building things, Bill's designs were pretty primitive. But he is one of the few students I've ever had who, as one watched, rapidly acquired a feel for nice ways of making something, a clever way of doing it. Most of my students seemed either to have been born with this kind of talent or they lacked it—and those who lacked such skills at the start never seemed to get much better—except for Bill Hewlett. He acquired the flair through his own initiative and drive.

"Meanwhile, Packard had accepted a job with General Electric. I felt Dave should have taken at least one year of graduate work before ending his formal education. However, this was the time of the Great Depression, 1934, and Dave was quite flattered to be offered a job by General Electric at something less than a dollar per hour.

"However, it turned out all right. He was with GE for three years, and made quite a position for himself there during that time. Their program called for the new college recruits to be assigned successively to different departments to run tests on generators, motors, and other equipment as a way of becoming familiar with GE products. One of Dave's early assignments was in the vacuum-tube laboratory. The man in charge there spotted Dave as having unusual talents and somehow managed to grab on to him; that ended the rotation!

"In less than two years after Dave arrived at GE he was the senior author of an IRE paper announcing a new vacuum tube device—the GE version of the ignition tube which immediately became a widely used product. He thus achieved a position of importance very quickly.

"During that period, when Hewlett was in Palo Alto and Packard was in Schenectady, I would make a trip East once or twice a year, and would usually go through Schenectady and act as a sort of message carrier—tell Packard what Hewlett was doing, and vice versa. In a way, I was carrying personal impressions back and forth between these two young men who continued to nourish the idea that they would some time go into business together. They were also corresponding.

Main "quad" of the Stanford University campus as it was during Fred Terman's student years.
Barely visible building at far left housed Professor Terman's first electronics classroom and workshop.

"Hewlett studied at Stanford for a year after graduation, went to MIT for a master's degree, then returned to Stanford and did some freelance research, took some courses, and built the diathermy machine, and also a rather bulky recorder for brain waves wanted by a woman doctor connected with the Stanford Medical School.

"To complete the requirements for an Engineer's degree at Stanford, Bill had to prepare a thesis. At that time I had decided to devote an entire quarter of my graduate seminar to the subject of 'negative feedback.' I had become interested in this then new technique because it seemed to have great potential for doing many useful things. I would report on some applications I had thought up on negative feedback, and the boys would read recent articles and report to each other on current developments. This seminar was just well started when a paper came out that looked interesting to me. It was by a man from General Radio and dealt with a fixed-frequency audio oscillator in which the frequency was controlled by a resistance-capacitance network, and was changed by means of pushbuttons. Oscillations were obtained by an ingenious application of negative feedback.

"I was already interested in audio oscillators. This was the time of the Great Depression and we didn't have money to buy apparatus. As a result we had been building our own oscillators.

"In thinking about the device described by General Radio, my reaction was that while this was an interesting idea, their spot-frequency oscillator was very limited in its usefulness. However, it appeared that one should be able to put in a variable broadcast tuning condenser in place of the various fixed condensers that GR cut in and out of the circuit to change frequency, and could thereby generate a frequency that was continuously variable. I suggested to Hewlett: 'Here's an idea. Maybe you can develop it into something useful.'

"It was just a raw idea, with plenty of things to be worked out—such as a way to avoid generating a lot of distortion. And that's where Bill made his first invention—he introduced a small incandescent lamp into the system, thereby providing a resistance that increased in value with the amplitude of the oscillations, but wihout introducing any non-linearity.

"Bill worked out all the details, and then built a nicely packaged prototype that he demonstrated at a convention here on the Pacific Coast. He felt he had something that was both useful and marketable. However, Packard was in the East starting a promising career there, and had married Lucile only a few months before. Prospects of a partnership did not look too bright.

"Then, through an unusual chain of circumstances, my laboratory received a $1,000 gift—big money for those poverty stricken days. This gift was a byproduct of the Sperry Gyroscope Company's interest in the Klystron tube,

(continued)

Dave Packard

1943

Bill Hewlett

YESTERDAY

and was to explore some side ideas. Packard would be ideal for this assignment in view of his experience at General Electric with vacuum tubes, so I asked Hewlett: 'Do you think Dave would be interested in taking a leave of absence from GE to work on this project for nine months or so? We could pay him about $55 a month for nine months, and still have $500 for expenses. He could take a leave of absence from GE and so not burn his bridges behind him (remember there was a depression and good jobs were scarce), and decide for himself whether you are right in feeling you have an adequate basis for starting a company.'

"Hewlett's reaction was: 'I don't know, but I can write and find out.' I hope that letter was preserved, because on the basis of its contents Packard took a leave of absence and came out here. I saw the GE people a few months later, and they were very puzzled as to why Packard wanted to break his continuity with General Electric just to return to school, when his prospects in Schenectady were so bright!

"Back at Stanford, Dave worked half time on the tube project, and half time on formal courses. He told me subsequently that after being back a few weeks he knew he would never return to GE. With the oscillator, it was clear that they had something that would fly. You see, they built those first HP oscillators in Dave's garage, and sold them for $55, whereas competitive equipment cost $200 to $600. Very soon their confidence was justified by a large order. The sound engineer for Walt Disney's movie, 'Fantasia,' saw the oscillator, recognized it as good, and bought eight of them at one crack. This convinced the boys they were in business to stay!

"One could always tell when there was an order in the house, because the Packard's garage doubled as the HP production facility. If the car was in the garage there was no backlog, but if the car was parked in the driveway, business was good.

"Looking back on the 1930's, you'd have to say the electronics industry was in a pretty elementary state. The big activity was in manufacturing broadcast receivers. There was also a substantial volume of communications business—i.e., building radio receivers and transmitters for ships, radio equipment for short-wave communication, etc. There were even some people working secretly on radar in the period 1936–39, but I hadn't heard of it then.

"How did I get into electronics? I had always been interested in electrical things. In 1913–14 at age 13 I built a crystal receiver, using a silicon cat whisker (i.e. diode) detector. I had never seen a radio set but had read about them. After getting the receiver put together, I played around with it expectantly—and wonder-of-wonders—within 15 or 20 minutes I heard a signal—KPH—the San Francisco station that sent dot and dash signals to the boats, and I was hooked. I gradually learned the code. Finally, I built a transmitter and became a radio ham. That settled it. I was going into electrical engineering.

"In those days the big thing in electrical engineering was electrical power. I did my engineer's thesis at Stanford on a problem in the transmission of power at high voltage, worked for PG&E in the summer of 1922 doing some field work on power-line measurements, then went to MIT for further graduate work. Electrical engineers just didn't go for a Ph.D. in those days, but I was leaning toward a university type of career, and my father thought it would be a

"In the summer after receiving my doctorate I discovered I had tuberculosis and I spent a year in bed. During that year I did a lot of reading about vacuum tubes, vacuum-tube oscillators, amplifiers, and other 'radio' subjects, and discovered that all the advanced circuit theory I had studied at MIT was applicable to radio systems. This discovery changed the entire course of my subsequent career. Meanwhile several job offers came in, including one from Stanford, which I accepted, in part because of the climate. During my first year of teaching I suggested to the head of the department that I develop an introductory course in 'radio.' This was offered in the spring of 1926 and I added additional work in radio the following year. Thus was instruction in electronics introduced at Stanford.

"As I have already said, things were much simpler in electronics then. Hewlett and Packard, for example, were able to build commercial versions of their oscillators with the tools that one could use in a garage—bench, vise, drill press, screw driver, file, soldering iron, hacksaw, plus purchased components. It was a handicraft kind of activity, whereas now one must have at least half a million dollars to get started.

"A distinctive characteristic of Bill and Dave, and as I see it the secret of their success, has been that no matter what the situation in which they found themselves, they were *always* able to learn what they needed to know *faster* than the situation built up on them—a very unusual talent that shows up in various ways. In particular, irrespective of wherever they land, they have always risen to the top.

"Thus when Dave was elected to the Stanford Board of Trustees in 1954 he was the youngest trustee on the Board. A few years later, in 1958, he was elected Chairman of the Board, and was still the youngest trustee on the Board! He had thus quickly established himself in a rather august group of men with whom his previous contacts had been only nominal. Hewlett, meanwhile, had been elected as a Director of the Institute of Radio Engineers (now IEEE). A few years later I happened to be on the Nominations Committee. I was ready to propose Bill as president, and gave a lot of thought as to how I could tactfully introduce his name without overdoing the job of pushing one of my former students. However, this problem solved itself because before I had a chance to open my mouth, the chairman of the Committee (a Bell Laboratory's man who was also an IRE Director) said that the man who had clearly been most effective on the IRE Board during the last several years was Bill Hewlett. Hence, all I had to do was to concur. Thus Bill became the second president of IRE from west of the Mississippi River!

"Again, the way Packard functioned on the Palo Alto School Board was typical of him. The then Board president told me that immediately after being elected, Dave came to him and said that he (Dave) had only so much time available, and so couldn't be 'up' on everything, but he could take one or two assignments and follow through on them. Now, the big problems at the time, 1948, was the need for more classrooms, so Dave took on the job of being the board expert on facility planning. That he did well is indicated by the fact that Palo Alto never had to go to double sessions in the schools, and the voters passed all the school bond issues.

"Hewlett and Packard also had an important influence on the development of the electronics industry in California during and following World War II. At that time HP employed about 100 people, but that still made them one of the larger firms around here.

"The center of gravity in electronic technology was then the East Coast, while the Midwest had developed large manufacturing capabilities. However, although the Far West had some creative engineers and manufacturing facilities, it was not regarded as counting much in the national scene.

"Thus when I was at Harvard heading up the anti-radar project during the war, my proper Bostonian business manager couldn't understand why one of our people had placed a subcontract with an unknown firm in Los Angeles—namely Hughes Aircraft—for help on one of our projects! He complained to me about the preposterous idea that there was anything in California in electronics that couldn't be better done in New England, and hinted that one of the California boys in the project had placed this subcontract with an obviously unqualified subcontractor to have an excuse to visit California.

"As a result, while eastern and midwest factories were straining with every nerve to get out war production of electronic items, many West coast plants were operating with

(continued)

Dave Packard (seated) and Bill Hewlett run final production tests on a shipment of 200A audio oscillators, the product that put them in business in 1939. The shipment may possibly have been the order of eight instruments that went to Walt Disney Studios in Hollywood for production of "Fantasia." Site of the above scene was the garage located behind the home rented by the Packards at 367 Addison Avenue, Palo Alto. Lucile Packard and Flora Hewlett, the wives of the partners, were important contributors to the young company during these early years, pitching in on administrative and even production tasks.

unused capacity. Dave thought something should be done about this, and accordingly lined up some bay area manufacturers and a nucleus from Los Angeles to lobby in a coordinated way to get a larger share of the war production orders in electronics. Thus the movement of the industry to California was started, and out of this effort came WEMA.

"That was the climate into which Hewlett-Packard was born and spent its early youth. At Harvard my war project did some business with HP in spite of my business manager, and this led to HP's entry into microwave signal generators. A young fellow named Bruce Wholey, who had earlier come to Stanford from Canada as a graduate student, designed a signal generator in the Harvard program, and HP was given the job of putting it in production, with Bruce handling the technology transfer. When war ended the Air Force wanted the program to continue, so Bruce took a job with HP.

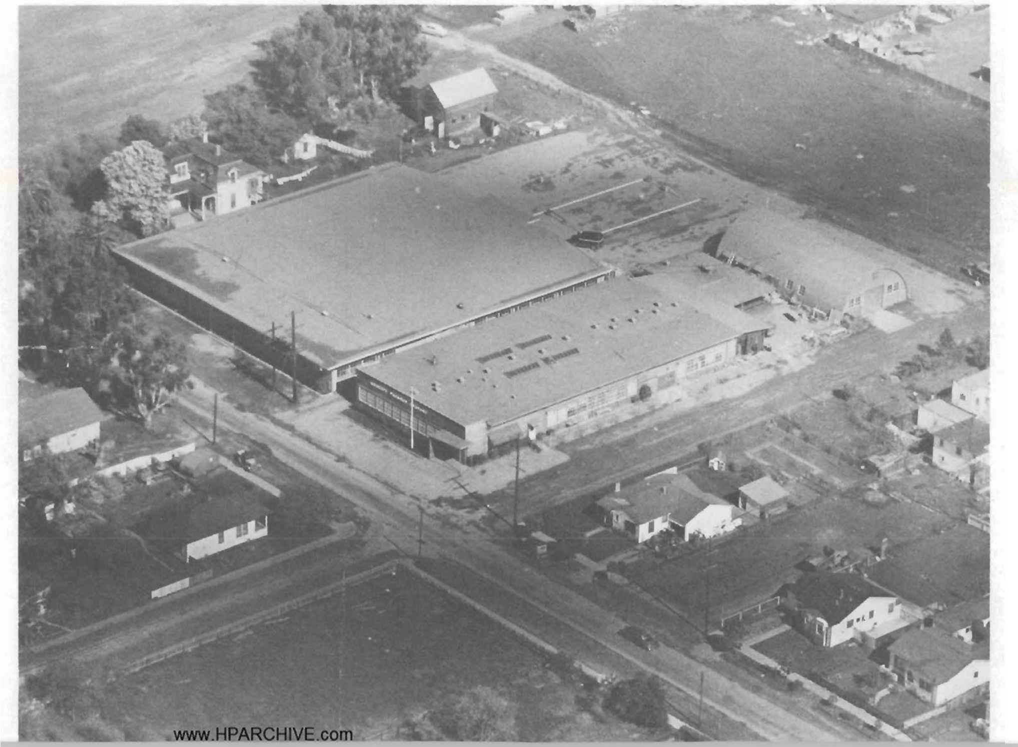
"In the early 1950's, Stanford University started to develop its lands for income producing purposes, starting with a shopping center, and a few small residential areas. It was also thought that there might be a possible interest in light industry locating near the university—a very new idea at that time. I liked the idea because I had come to the conclusion that there were important advantages in locating high-technology industries near a university—that by being close together we could benefit each other in a variety of ways. In this the Hewlett-Packard Company was my model. Their first product was the result of a thesis, and during their first year or two in business they were in and out of the Stanford Communication Laboratory almost every day. Today they hire our graduates and employ our faculty people as consultants, while we make it possible for HP engineers to obtain advanced degrees at Stanford by enrolling in courses that are made conveniently available by television.

"Back in those times Packard and I began playing a little game. People would come to see me about locating a business in the Stanford Industrial Park, and after talking with them, I would suggest they talk to Packard to find out what it meant to an electronics firm to be close to a cooperative university. When people came to him first, he would reciprocate. Creating a center of high-technology industry on the Peninsula was our goal.

"In the process of doing these many things, Hewlett and Packard firmly established both themselves and their firm. The result is that here today is a company with annual worldwide sales exceeding half a billion dollars, employing several tens of thousands of people. Moreover, virtually all of this activity represents new business generated by creating new products, and most of it has grown from that original business that the partners founded in 1939—rather than from acquisitions and mergers.

"Through it all—beginning even before World War II—the 'boys' have always tried to make HP people feel personally involved in the things they were doing—in sharing both the responsibilities for setting goals and the rewards for reaching them. In these matters they were ahead of their time, and this is one of the reasons for the success of HP."

YESTERDAY



Hewlett-Packard Company, circa 1948: In the foreground is the original "Redwood Building." Above it is the then-new concrete building, while the quonset hut at right housed the R&D area. Page Mill Road runs from lower right, intersecting Ash Street in the center. Recalling the construction of the larger concrete-slab building, Ralph Lee, executive vice president, says: "We were prepared for anything! If business had gone down we could have turned it into a skating rink—or a supermarket!" Of course, all the buildings shown here plus others are still in operation at this site—the first of more than two dozen major HP plant sites now in operation or planned around the world.

"There are other considerations..."

Frank Cavier, Vice President and Secretary

"JUST BECAUSE ALL OF US ENJOY WORKING under the HP philosophy doesn't mean that it came to us naturally or by instinct. Some of us had to learn it the hard way.

"I got my first lesson in HP's way of doing things very early in the game. At the time I was being interviewed for a job in 1942, Dave Packard asked me if I knew anything about cost accounting. I said 'no,' but that I would take a course in it to qualify for the job.

"Soon I began to find out what cost accounting was all about, and to think of ways to apply it at HP. I pictured myself digging into a situation to discover the costs involved, then more or less telling the persons in charge how they could improve on it.

"Well, Packard zeroed that out in a hurry. He let me know that it wasn't my job to tell people how to do their jobs. My job was to give them the information about the cost of doing something–tell them how they're doing financially–then let them make their own decision about what to do. Because there are other considerations beside cost.

"That's an example of HP decentralization of responsibility. But it really comes from a regard for the individual that is basic to all aspects of the philosophy.

"There was the time, for example, when an organization looking for an investment offered to buy the company for about 10 million. That was in the early '50s, I think, and it seemed like a huge sum of money to all of us then. But Dave and Bill turned the offer down. They probably won't say why, but it's my interpretation they felt this would expose the employees to a bunch of strangers–strangers whose interest was primarily financial.

"On another occasion when we were still small, we were given an opportunity to take on a $7 million contract. Now this was completely out of our bracket. To accomplish that sort of thing meant hiring a lot of people, and later firing them at the end of the contract. In thinking about this, it was clear that it would affect not only the temporary people but also those who were permanent. They would know that any time we saw an opportunity to make money we would grab it regardless of the results on people.

"Instead, the philosophy has been that when you come to work at HP we hope we are offering you a permanent job: you do your work well and we will provide the employment. So we turned the contract down, even though it probably would have made a lot of money.

"Actually, the 'people' philosophy shows up in just about everything that goes on around HP. The open floor plan–the lack of walled offices and status symbols–and the coffee breaks are part of it. The idea is that if you can see or meet someone easily, then you can communicate with them better. You'll be more informal about it, and that's good, because it means one less barrier to overcome.

"Sharing in profits and sharing in a general level of comfort no matter where you work are also reflections of the basic philosophy. I remember one plant we looked at with the idea of buying had a very plush executive suite. The entire office and laboratory areas were air-conditioned, but the manufacturing areas were not. The point is, this would not happen at HP because–while we have not always had air-conditioning–it is inconceivable that HP would put it in the front office but not in the shops.

"Flexible work hours is the latest example of the HP way–all based on the dignity of the individual. If it's possible for a person to make a decision about work hours, why not? Why should someone else be making decisions for you if you can make them yourself? Chances are you will make a better decision, for your own as well as the company's sake."

(continued)

YESTERDAY

An acid test for management...

Bruce Wholey, Vice President-Manufacturing

"IF I HAD BEEN A BUSINESS SCHOOL GRADUate, I probably would have gone about things differently when Dave Packard hired me in 1945. I didn't know what my pay was going to be until the first paycheck. And I might even have gone to work for one of the companies back in the Boston area that were much better known. In fact, a number of the fellows I worked with back in Radio Research Laboratory at Harvard during the war joined those companies because they looked like the comers in the electronics field.

"But a couple of trips to Palo Alto to complete the transfer of production responsibility of what became the 616 signal generator, gave me a very good impression of HP.

"First off, I really like the latitude and freedom on the job that the engineering staff enjoyed. They were anything but 'handbook' engineers, and seemed genuinely interested in finding new ways of doing things. On some occasions I saw them work all night to get a job done—a special job for the Navy—with Dave Packard himself going out in the small hours to find cigarettes for the team.

"Actually, HP had earned quite a reputation with the Navy. Hewlett's thesis on the audio oscillator was known to us as engineers involved in radar and radio. Packard, of course, was very much a part of the R&D team, and so was Hewlett after his return from the Army.

"While the HP philosophy was quite visible to us in those early years, management-by-objective probably had its acid test in 1957, following the first management meeting. At that meeting it was decided to reorganize the company along more structured lines, with Bill and Dave delegating the functional responsibilities they had held.

"The R&D activity was set up into four lab groups. I'll never forget the sight of Packard walking past the microwave lab, not saying a thing. It must have been hard for them to pull out that way, but they stuck to it, even to the point of letting me run one project right into the ground. It was a very interesting technical project I had sold myself on, and they let me go right ahead and discover that there wasn't much of a market for it.

"To me, that management meeting and the changes that occurred as a result of it were a landmark for the company. I think it proved that we could change, and that we could not only preserve our management philosophy but also strengthen it. Growth could happen without us having to give up the good things that made HP different.

"A lot of companies never made it past that point—remaining small or changing their style—because top management didn't know how to let go."

"We've all learned a lot..."

Swede Wild, former Equal Opportunity Manager (retired)

"WHERE HEWLETT AND PACKARD GOT their philosophy about people and management I don't know. But it's a good one, and it works.

"An example is what happened to me after I came to HP in 1944. I came from the construction business. In fact, I was supervising the addition to the Redwood Building when I first met Packard and got thinking about working for him. I didn't know a thing about machinery. But Dick Arms showed me how to stop and start a lathe, and how to sharpen a tool. And I got a lot of help from the other guys in the shop.

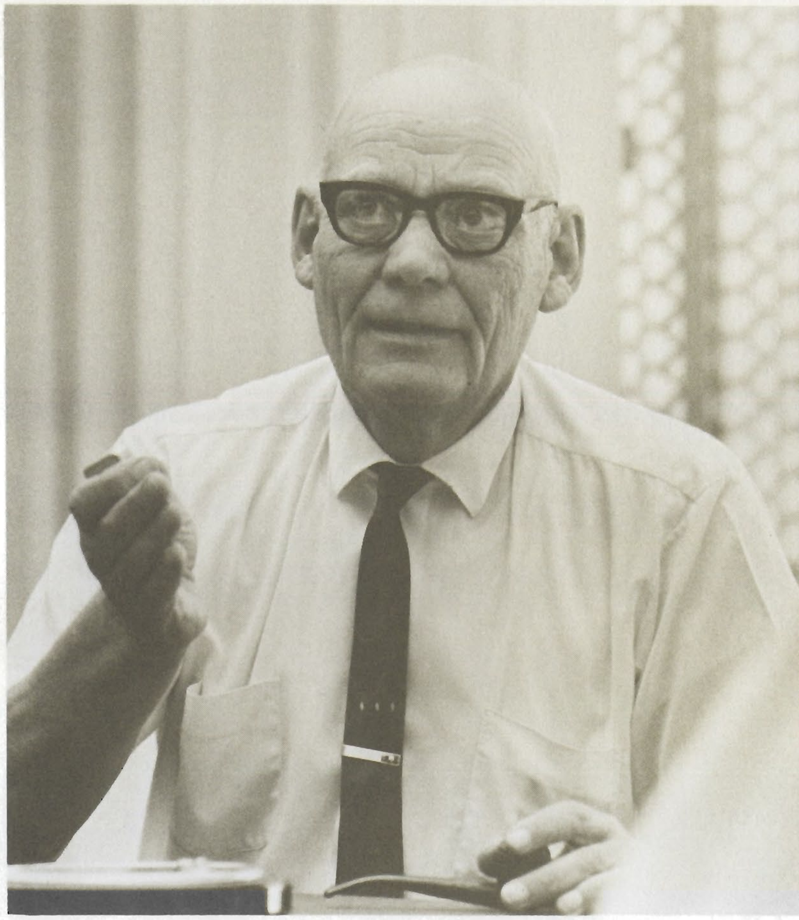
"Now, that was kind of unusual in itself. Because most old-time craftsmen try to keep their skills to themselves, unless you come in as an apprentice. But HP seemed to have this spirit of helping the other fellow. It's still there, and it's what helps make it a great place to work.

"In the shops, of course, you meet a lot of guys who have come in from other jobs. Maybe they've had four or five other jobs, and they're kind of disillusioned about industry. They're not ready to believe what we say about the company. They think it's another 'line' which they've heard before, and that sooner or later they're going to get pushed around or fired if they don't toe the line or business falls off.

"They've never heard the philosophy that 'We want you as a permanent employee. We want you to succeed and we will help you.'

"Of course, we all had to learn it, too. I'll never forget the time a fellow in the shop asked me about a problem he had. I've forgotten the subject. I gave him an answer that I honestly believed in, but it didn't please him for some reason, and he asked Packard about it. Packard could have told him I was wrong, and called me on the carpet. Instead, Dave asked him: 'What did the Swede tell you?', and then said, 'Well, that's absolutely right.' Then Packard got in touch with me and told me my rear end was sticking out a foot, and that I had better talk to the guy again and tell him I was wrong the first time. The thing is, I never got cut down, and I got a chance to correct a mistake—and to learn something about how to treat people.

"We've all learned a lot in the last few years, particularly in the area of equal opportunity. I honestly think that HP started out as an equal opportunity employer, but it was based on the ability to meet our qualifications. Consequently, very few minority people were hired, because they had very little opportunity to become qualified in our skills.



"Then came the riots, and the Watts episode, and the marches as minority people began demanding their rights to a fair share. And we began to change our attitudes. We started looking a little harder at people without the usual qualifications. And at first we said, 'We want to do this for them, but not at the expense of our skills.' Of course, that by itself is a racist statement because it still excluded people who might not be qualified but who could become qualified. And that's the direction we've taken—bringing people in and giving them the chance to learn a skill and a living.

"After all, not everyone has to have the potential of becoming chairman of the board. For years, that was the way we hired. Everybody in the shop had to be a high school graduate, and he had to be an all-around guy who could run any machine and do any job. And at first we probably needed that kind of person. But now we're big enough that it's O.K. if a person can't do all those things. It's O.K. if he can do a good job in a limited area and is happy doing it, because we can keep him busy.

"The change, as far as I am concerned, is all to the good. In the years since we've gone this route—reaching a minority employment rate of nearly 20 percent in the Peninsula plants, for example—we've experienced some of our highest levels of performance and profit."

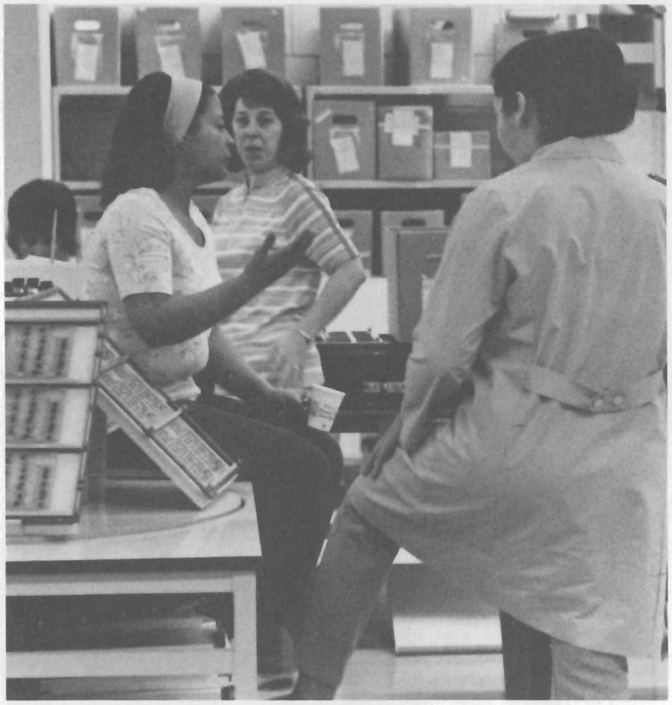
(continued)

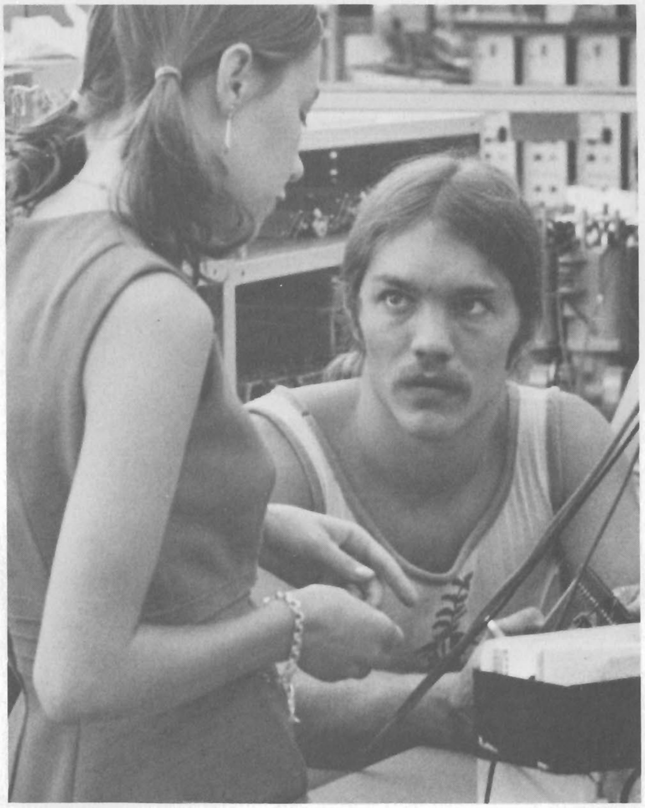
The HP experience

TODAY

Can you define "the HP way"?
Do HP old-timers think it still exists?
Does it really "work" for new people?
But how do you expect employees to work a full day
if you don't stand over them all the time?
How well does it "travel"?
Is there a housemother in the house?

The importance of open and informal communications among HP people is suggested in these photographs: production test line (8640 signal generators) at right, typical open-floor plan at Data Systems administrative area above, coffee break scenes at right above, and a "tell me how to do it" conference at right.





TO DEFINE THE "HP WAY" YOU MIGHT start with a few phrases that MEASURE heard in its research: "A people-oriented business philosophy," or "a way of conducting serious business on a congenial basis," or "a unique management style that reflects the attitudes of the founders," or "the opposite of the law of the jungle." And so forth.

On the other hand, quite a few people are not sure it can be so easily defined—or should be, but all are positive that "it works." In fact, on the basis of a wide sampling of opinions and experiences—both random and arranged, what really comes through is an attitude of very general and even enthusiastic support for the way things get done around the company.

Some of the feeling behind that support today goes back to July 1, 1970, when Bill Hewlett announced the company's singular approach to problems brought on by a sharp business recession: Rather than cut people from the U.S. work force, HP asked employees to take a day off without pay every two weeks to achieve a 10 percent reduction in work schedules.

The flexible hours approach to the work day also looms large in the feelings of many people, especially production people. Above all, they say they appreciate the trust implied in this pioneering program.

The recent introduction of a "take your pick" group insurance program also was frequently cited as evidence of the company's concern for people.

But a little digging brings out the fact that most people can relate to the HP way by means of some personal experience, as witness the following:

(continued)

Bill Beckmann

TODAY

ACCORDING TO BILL BECKMANN, LATHE area section manager for Manufacturing Division, there's nothing new about concern for people at HP—nor is it outdated: "If I were back in Milwaukee I'd probably be just like a lot of my old buddies—stuck in a job shop. Back there, if you are a journeyman, you talked to nobody. You expected no help and you gave none. That's how I learned my trade. So when I came to HP in 1955 it was unbelievable. People helped each other. They seemed to enjoy working! Supervisors listened to you! Dick Arms, who now runs the electrosensitive paper plant, can tell you about some of the problems I brought him with my 'bull-of-the-woods' background.

"The big thing, though, is that you were encouraged to take more training so that you could accept more responsibility. I've been through five company-sponsored supervisor training programs as well as college courses on my own. And we've had fellows come in here as apprentices who kept right on working and studying and are now engineers. The company spends a lot of money on that sort of thing.

"It's no different today. The emphasis down here in '4-lower' is still on training and education.

"Believe me, being a supervisor at the shop level in HP is a lot more challenging than in a job shop. Here we don't solve our problems by firing and hiring. If we notice a fellow isn't producing, we try to find out what's bugging him—not by threatening him but by listening to him, gaining his confidence, and directing him to the proper place for help."

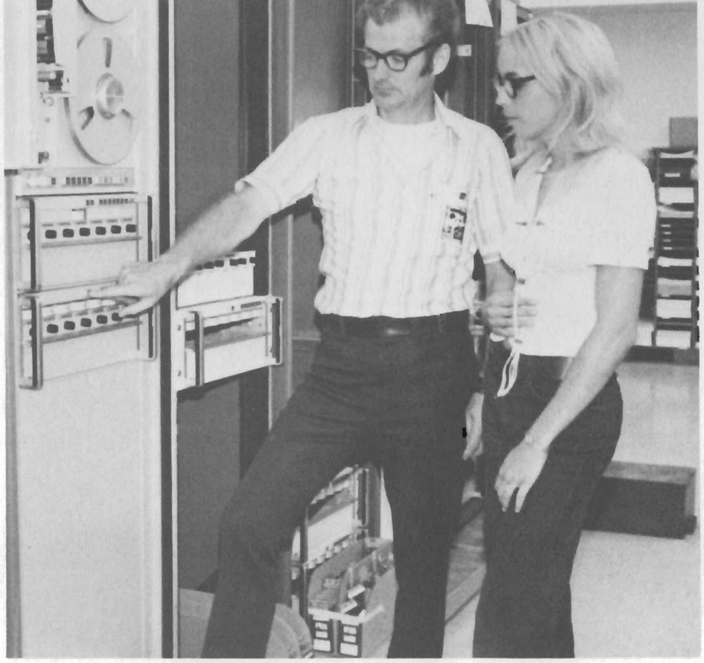
"At one time when I first started here I felt myself getting uptight at what seemed to be the laxity of rules in the sales office. But I found it wasn't laxity. It's just a more informal atmosphere. They get more done because they communicate better." Ann Gill, switchboard operator, Eastern Sales Region office, Paramus.

Barb Johnstone

HP housemother: Hotline for help

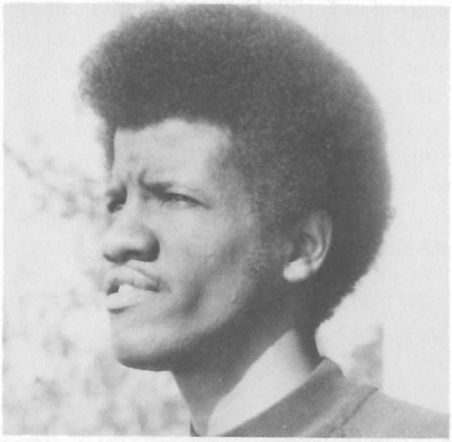
BARBARA JOHNSTONE OF DATA SYSTEMS may not enjoy being called an "institution," but in a sense she is—a representative of a unique band of HP practitioners known as "housemothers." You'll find them located near the middle of the production areas at larger manufacturing divisions, generally listening to or discussing the personal problems that people bring to them, or counseling new people. In this way they serve as liaison between manufacturing and personnel departments. "The goal," says Barb, "is to get help as soon as possible, take people's minds off their personal problems so they can go back to work and not worry."

All kinds of problems turn up, ranging from babysitter difficulties to insurance complications to personality conflicts. In dealing with these, says Barb, who joined HP as an assembler, the key element is trust. "When they asked me to become a housemother, it took a while to gain the confidence of people on the line. In time they learned that I wouldn't do anything without their approval or betray a confidence. I think I've got the best job in the world."



What must be a very common experience was described by Karen London, a young housewife and mother who's been on the mechanical assembly line at San Diego Division for the past six months: "This is my first industrial job. Before, when I thought about working in a factory, I pictured it as dull drudgery where you just sit and do whatever you're told. It was an impression I think I got from movies and high school. But before hiring me they took me on a tour and showed me everything. Somehow they made it very easy to get started. Now I've become hooked on electronics. I want to know more about it — go back to school part time. That's partly to help me on the job but also because it's a fantastic new world for me."

In the stockroom of Eastern Sales Region's Paramus, New Jersey, office, Calvin Berryhill offers a different version of the beginner's story: "You see, I had a degree in marketing management from Southern University, but after applying for work at place after place around here I became real discouraged. So when I applied at HP I understated my qualifications. Right off I liked what I saw here and felt I could get a good start. Then after being here a while and getting some promotions I decided I could tell them about my college work. I had a feeling they wouldn't hold it against me." Bill Olsen, regional personnel manager, said "Cal's story was very understandable. As a matter of fact, he was promoted in his first three months because he was doing an outstanding job. Naturally he want to get into a professional position. We'll give him every consideration to get there."



(continued)

Stan Selby

THE STIMULATION MAY NOT BE RECOMmended for a former heart attack patient, but in Stan Selby's case he feels good when he can get into a lively discussion about the early days of Loveland Division. Now headquartered at Colorado Springs Division as assistant to vice president Bruce Wholey, Stan pioneered the Loveland Division, opening it for business in July, 1960:

"The thing about Loveland is that we had a chance to start from scratch–with all *new* people in a brand *new* community. We deliberately set out to transplant the original HP spirit there, and to do some new things. We were determined to go out and beat the entire company in terms of production, quality–and everything else.

"One of the things we did right from the start was to get rid of time clocks. We just never installed any. I had always resented them because I was often a few minutes late, and didn't like lining up–and I had seen outfits where they turn people loose five minutes ahead of time so they could punch out. A lot of sense that makes! In any case, it's no way to treat adults.

"The biggest question was: How do we tell our own people–new people–who we are and what we stand for? What I ended up doing was getting on a stepladder every Friday afternoon following coffee, and just talking about these things to everyone. I told them that since they were each the one hired out of every twenty applicants, we could be proud of who we are. I tried to put across the message that 'You are HP to the community.'

"Later, the meetings got too big to talk to everyone at once. So we held smaller ones, bringing in various managers and visitors to let people know what was going on.

"How else can people care? Why should they be concerned if you don't provide basic information–bad as well as good?"

TODAY

How do you get a company picnic together? A really smashing uncatered big-time 2000-people picnic that everyone remembers? You get a fellow like San Diego's Marty Salisbury to head it. Which isn't easy, because a few years back Marty wasn't so easy to get along with. "I came here as a machinist soon after the division moved from Pasadena. My attitude was formed in the job shops and the aerospace industry where you're just a number. Things were unsettled here, and I soon got off on the wrong track — going my own way. I really thought they had it in for me. Then I started looking around and I saw how people got along, and how the company treated them. Lots of little things. And the educational assistance program — I said, 'that's not too bad!' Finally, I got with my supervisor and we sat down and hacked it out. We laid it on the line: he would take an interest in me; I would take an interest in the department. So I started getting involved in the recreation area, and I asked Personnel how I could advance in the company. Would you believe it, at the last annual meeting of the recreation committee they ramrodded me into the presidency! One thing, we felt the picnic should come from the people — not catered as before. So we got busy organizing a special committee with a plan of action. We also got seven or eight other programs planned for the year. It sure has given me a sense of belonging, and it's showed me that HP has a lot to offer." Meanwhile, Marty attends Palomar Junior College with HP assistance, studying accounting and business law with the goal of getting into production control supervision.

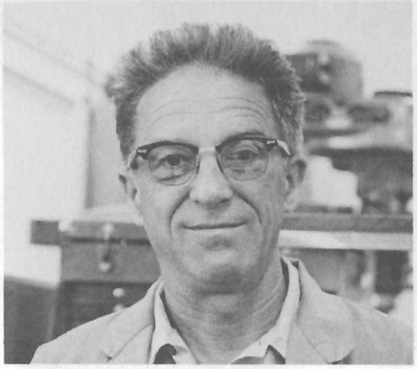
Yes, you can come back...

Working out of the Neely sales office in Denver, Colorado, Don Moore set a calculator sales record that tied him for first in the U.S. in 1970. Next year a lull set in as salesmen and customers awaited the introduction of a new machine; new sales territories were drawn up and new quotas set. As he says, "I became impatient. A real estate developer offered me a job with big promise, so I took it. Then they reneged on their promises, and I went to work for another calculator company. That's where I really found out about HP. I found I really missed the people I had worked with there. I discovered how important it is to have pride in your products and organization. But I never thought there was a chance of coming back. Then one night — about 11:30 — I got a call from Dave Etter, an old buddy now at the Fullerton office. Dave said he just wanted to know how I was doing, and had I ever thought about returning? I said 'Yes, about one second ago.' Dave put me in touch with Chuck LaPorte at North Hollywood headquarters. I was made to feel O.K. about coming back — that HP feels a person who leaves with good motives then comes back may even become a better employee. Then I was told that a place was open for me in the Palo Alto office — if I was prepared to move there at my own expense. Well, I'm here now, and very happy to be so. When I left it was something I felt I had to do to test myself, and I probably would still be unhappy if I hadn't tried it. But there's no way I'd ever do it again."

THE RED
GARTER
BEER

San Diego Division's 1973 picnic committee, headed by Marty Salisbury (left center above), staged a ripsnorting company picnic — including the hat-twirling horse act enjoyed by HP people and their families at right.

(continued)

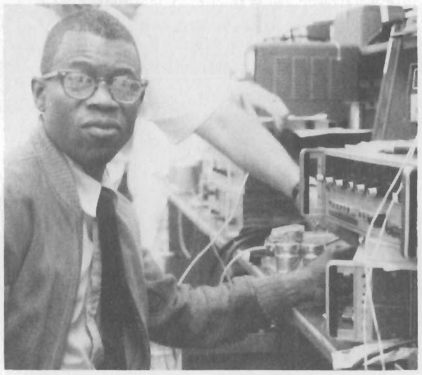


Evan Owens

Caroline Hendrickson

TODAY

Lou Mikkleson



George McGreen

Room to be yourself...

PERSONAL DEVELOPMENT AND PROFESSIONAL growth probably are thought of most often as linear or vertical progressions—up the ladder. But for some HP people that is not where the action is. For them, growth is a matter of finding room just to be themselves.

Lou Mikkleson, R&D section leader at Avondale Division, recalls his experience at the time F&M Scientific was merged with HP: "I was in the position of engineering manager at F&M. I was doing what I think was an acceptable job—but I just didn't feel compatible in it. I had not had that much prior experience managing numbers of people, and there were decisions to be made that I did not particularly enjoy making.

"I made my wishes known, and I know many places would have given me no option but to resign. But HP made it possible to exit gracefully and to get back into work that I enjoyed—independent bench research. It was handled very well.

"Now I'm faced with the prospect that our section's latest project will grow into a big enterprise!"

Evan Owens, tool designer at the Waltham Medical Electronics Division, came to HP nine years ago after a 15-year hitch as a machine-shop manager: "All I got out of it was money—and a big headache. That was a place that drew a pretty hard line—hire and fire. I was responsible for a 40-man crew, but when it came time to hire they would send me someone who had been signed without any say by me. There was always someone looking at me ready to haul me on the carpet if anything went wrong. So I guess I operated out of fear too—and so on up and down the line. I don't want any more part of that.

"Of course, people here will bitch about some things, too. But this is normal, particularly in areas where jobs are repetitious. But there is a way out here—by education and training.

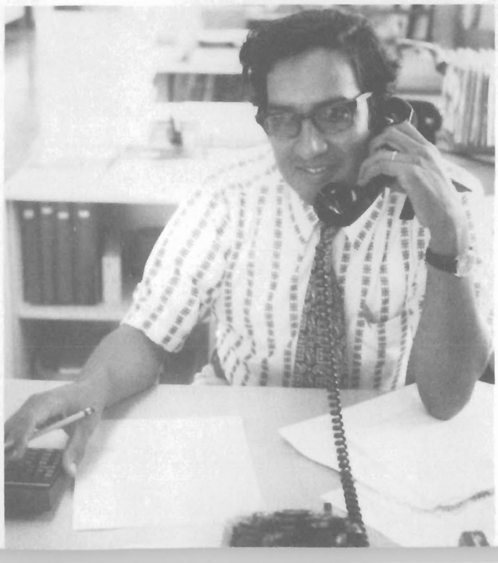
"For myself, I'm doing what I was trained to do, and I don't want any responsibility except what I pile on myself."

George McGreen, engineering lab technician at New Jersey Division, is a self-confessed perfectionist. It's a syndrome that was well suited to a career in the Green Berets—where he was required to learn thoroughly such diverse skills as parachute jumping, submarine ascents, mountain climbing, skiing, scuba diving, and interchanging weapons and ammunition, and to go anywhere and do anything with confidence. But, after entering electronics and HP, it was not the most comfortable quality to bring to the production line: "I found I couldn't maneuver too well under the pressure of end-of-the-month production. I like to finish what I start and not put it aside to rush into something else. So I looked at the lab situation and felt that there was where a perfectionist should be. Here's where it pays—having time to get something as exact as possible."

Caroline Hendrickson is presently a member of the sheetmetal department at Avondale Division, but there is evidence that this may not last forever: "I like lots of variety on the job. I started in the cable area eight years ago. Since then I've worked in soldering, laying wire, wire cutter and now sheet metal. All I did was ask the foreman and he said, 'Try it. You can always come back here if you don't like it.'

"To me that's just a part of the spirit around here. You feel you can come to work and enjoy it, and not just put in a day on the job. You can try to go as far as you want—and HP will back you."

Are those people real R&D professionals? Packing in boxes and lugging furniture up and down stairs into the small hours of the morning? Is that what they get paid to do? Actually, they were Medical Division engineering staffers responding to what can only be called an unusual situation last July 11. It seems the floor of their building had suddenly sagged about eight inches! After evacuation, it was decided to move the section to new quarters up the street. With enthusiasm and a few strained muscles, this was accomplished almost overnight—to the amazement of some outside observers who obviously didn't feel the same sense of commitment to their jobs.



PROFILE: Benny Garcia. Born in Ecuador. To U.S. to study electronics, with one-year work permit. Joined HP at New Jersey. HP endorsed request for resident visa: "Changed my life." Production technician two years. Transferred to service department: "More challenge." Appointed service engineer in Eastern Sales Region. 1973 EE graduate of Newark College of Engineering: "A long eight years"—with HP educational assistance. Back to New Jersey Division in marketing. Now, it's onward to an MBA: "Very rewarding."

(continued)

...do you really expect people will work if you don't stand over them all day?

Management by objective is very much alive and functioning in Stanford Park Division. There, Dan Shenk, supervisor of the 8640 microwave signal generator production line, discusses an idea that Anna Kytle proposed for a method of multiple soldering. Many such ideas come about by the process of personal goal setting. The process begins with a "target." In the case of the 8640 line, the target is a production goal for the coming year, and is developed from all the inputs and expectations gathered by the division about the worldwide marketing prospects for this relatively new instrument. When Dan first receives the line's annual target, he discusses it with his lead people, Shirley Flock and Jean Rapanut. Together, they write out in detail how their areas can support that goal. Soon after, all line people meet to hear and discuss the target, and offer ideas and comments. Thereafter, it's a continuous process of testing and applying ideas, of monthly meetings to discuss progress, of personal evaluations and development.

"I thought: These people are putting me on. Why, there's not a shop in the world where someone isn't bad-mouthing the management. So it bothered me that no one was saying anything really bad about HP. I still can't say I really understand why it works, but it does. And the surprising thing is that results are better here. Peer pressure has something to do with it. And another factor is that you're given work assignments days in advance instead of one at a time every couple of hours. They aren't looking over your shoulder. No matter how much they give you, you seem to get it done."
Jon Wood, machinist, Avondale Division

AS A RESULT OF INTERVIEWING 21,000 EMployees about supervisory practices at its Hawthorne Works in the years 1928–30, Western Electric Company set in motion some ideas that are still ringing loudly around the industrial world. One of the unexpected discoveries of that study was the fact that people will endure all manner of circumstances that normally would be cause for grievance procedures—if only they were given some form of recognition. In fact, the interviews themselves were hailed by the employees as a sign of recognition.

Following up the trail of these studies, industrial psychologists in time developed a whole range of theories about what motivates people in their work. They found, generally, that working conditions and salaries were important only up to a point—that is, improvements in such factors are short-lived in terms of the job satisfaction they give. In fact, results showed that the absence of such factors can lead to dissatisfaction, but their presence does not serve as a motivator. Far more important, researchers such as Fred Herzberg have pointed out, are the factors contributing to a person's self-esteem—that give people recognition, opportunity, participation, responsibility and a sense of achievement.

For managements, the question then became: How to do it? Many approaches were formulated and tried, including counseling, job enlargement, "industrial democracy," management by objective, job enrichment, and various combinations of these.

For its part, Hewlett-Packard did not suddenly awake to these findings and reshape the internal relationships of the company to fit a theory. Rather, it discovered in management-by-objective a theory that pretty well described the existing kinds of relationships that had evolved within the company. But the theory did give the company verification of its approach, as well as a formalized or short-hand method of describing it.

Dave Packard put this into context during the recent general managers meeting when he said: "Early in the history of the company, while thinking about how a company like this should be managed, I kept getting back to one concept: If we could simply get everyone to agree on what our objectives were and to understand what we were trying to do, then—starting with people who want to work, and providing them with the right conditions and resources to do it—we could turn everybody loose and they would move along in a common direction."

This philosophy was summarized some years ago in the sixth Corporate Objective on MANAGEMENT: "To foster initiative and creativity by allowing the individual great freedom of action in attaining well-defined objectives."

The real question, of course, is: Does it work?

The answer, it seems, is: Yes, most of the time it works on a scale of from "well" to "very well." The downtime is accounted for in three ways: First, those occasions when "management-by-direction" decisions are indicated by changing conditions, such as economic recessions and other crises requiring quick, company-wide response. Second, those times when people mis-communicate or mis-interpret an objective. Third and most serious, is when the basic operating nature of management-by-objective is misunderstood.

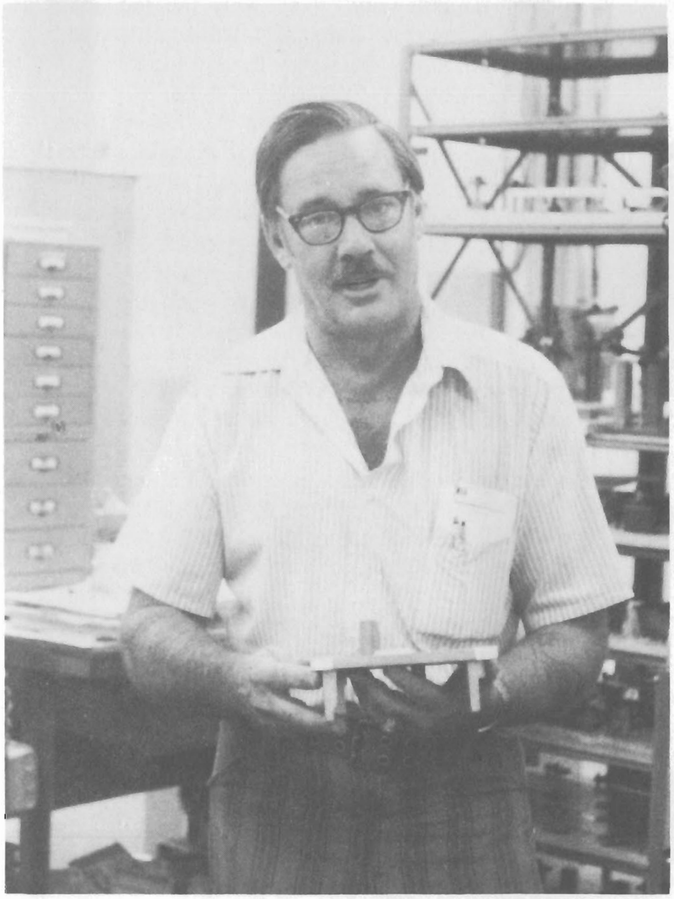
One personnel assistant recalls coming to HP from a company that installed "MBO" by announcing that everyone *would* establish objectives for themselves and *would* be evaluated according to the degree to which they met those objectives: "It became 'management-by-objective-by-directive,' " he observed "Instead of becoming a goal it became a goad—the exact opposite of what was intended. Things got so fouled up I quit."

At least one HP organization went some short distance down the same path a few years ago, except that management took heed of the rumblings and reevaluated its approach. The interesting thing, really, is not that a mistake was made but that the HP people—both operations and management people—responded to the situation swiftly and surely.

Finally, *how* does it work? In particular, how does it really work for people?

(continued)

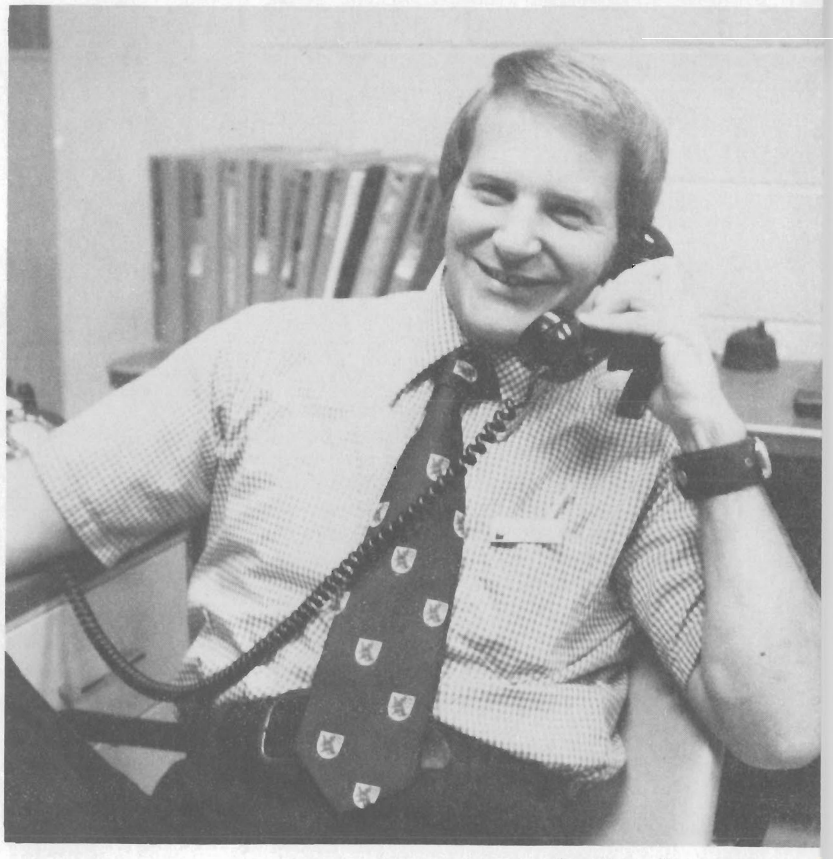
TODAY



"Don't get me wrong. The formal yearly review of people is important. But I'm not going to wait one day if I want to bring something up— or the employee does. Actually, we might hold a formal review any time if we have to caution a person about something. And generally we can settle it the first time." Ed Stevens, shop supervisor, New Jersey Division

Even in the most routine-type work there's room for personal involvement and sense of participation central to management by objective. At Colorado Springs Division, for example, Shirley Cochran and her crew of PC board loaders have just completed a redecorating project. Each area was asked to vote for its preference as to color of chairs and tables. They were also given their say as to the kind of party they wanted in celebration of surpassing production goals — "punch party" won. The "lazy Susan" operated here by Hedy Black is also, of course, very much in the spirit of MBO. It allows Hedy to work on a substantial part of a product almost to completion, as opposed to the single-operation approach, common to most industrial assembly lines.

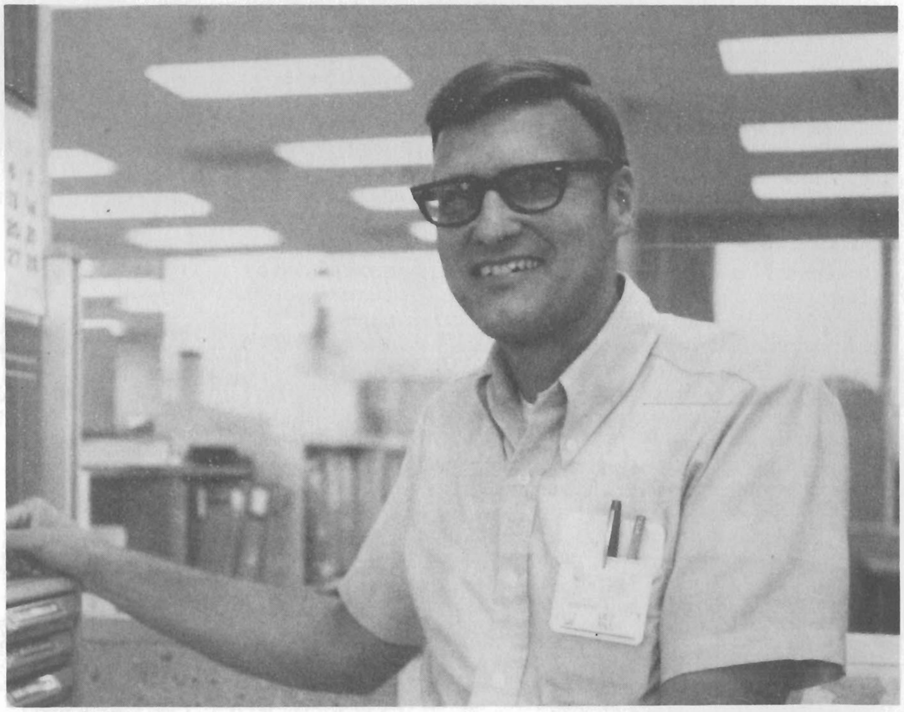
"Joining HP with a background in personnel management and personnel consulting, I previously had been heavily involved with management programs centering around people's needs for self-esteem and self-actualization. Most managers understood the theory, accepting it as good sense management, yet most were reluctant to change their style." Speaking was George Trickel who joined the Colorado Springs Division about a year ago as Personnel Manager. "Why did that happen? Lack of commitment in most firms — commitment to the ideas that people are basically honest and possess a strong need to contribute and be recognized. Are HP managers any different? Yes, not only are the managers different, but all people appear to be different. They really seem to enjoy coming to work every day. It is evident that our commitment starts with Bill Hewlett and Dave Packard. Their commitment, and our commitment to HP employees, is clearly stated in the People Objective. On a daily basis this commitment is manifested in terms of an HP management style represented by delegation of responsibility and authority, open expression of ideas, numerous discussions about people and their contributions, minimal cleavage lines, personnel guidelines rather than rigid rules, programs like flexible work hours based on lots of trust, and last but certainly not least, our individual merit system of wage and salary administration. Sounds like we're maybe perfect. Well, probably not. Borrowing an idea from division manager Hal Edmondson, concerning our employee relations, 'on a scale of one-to-ten we are surely closer to the ten than we are to one.' The question and the challenge is how do we move to ten on the scale. The answer depends on each of us and our attention, and perpetuation of the HP management style."



(continued)

At Loveland Instrument Division, Mary Sweitzer and her assembly section have used MBO thinking to attack some special production problems. These problems arose when shortages of parts began to short circuit production, resulting in a buildup of unfinished instruments. Under these circumstances, test and calibration people working toward the end of the production process normally would find themselves running out of work — not enough finished products coming through. Instead, the Lovelanders devised a "kitty" system involving those other instruments that don't have long production runs. The idea was that as technicians and calibrators finished testing their regular products they would go to the kitty and pick up a short-run instrument for testing. According to Mary, and Annabelle "Andy" Blocker shown seated, their system works very smoothly — without any need for promoting or quota setting.

"Under a system of individual responsibility and choice, the role of a supervisor becomes much easier. It means the supervisor does not have to agonize over every decision or observe every activity. Things happen more or less spontaneously, because people want to do a good job and want a say in how to do it." Les Bailey, manager of purchasing services department, San Diego Division.



but how well does it travel?

AS A COMPANY DOING BUSINESS IN MORE than 100 countries, and with manufacturing facilities in a half dozen locations outside the United States, HP has had to take a very broad view of the world. It's a view that necessarily includes the many "isms" abroad in the world today, particularly the influence of nationalism as well as the tides of political and economic change.

HP has addressed itself to these challenges in one basic way, that of encouraging the greatest possible degree of local character and autonomy at the various international organizations.

Country sales organizations, for example, are all locally incorporated and staffed by nationals. In the international manufacturing organizations, only a relative handful of people from the U.S. parent are involved in management.

That being the case, how has the company's philosophy fared in its journeys to the many parts of the world?

Surprisingly well, it turns out.

Karl Schwarz, general manager at the Grenoble plant, believes "the HP way is as appealing in France as it is in Palo Alto. In my opinion, this has to do with the fact that HP principles are based on faith in the goodwill of people. But you learn how much these principles really mean when you are hiring foreign nationals.

"I particularly remember the reaction of one of our production girls, Anna Cussey, when we interviewed her and explained our system of flexible hours. As a mother, she realized how convenient this would be in arranging her schedule. She was incredulous that a company would trust its people with something like that. With a look of shocked amazement, she whispered, 'C'est formidable'. "

According to Ugo Assi, general manager of HP Italiana, "The best way of judging a policy is to measure the results achieved. All of the good signs—low turnover, high morale, and general satisfaction with terms and conditions of employment—are present in HP Italiana. In fact, it has become very rare for anyone with over two years in the company to leave. In the area of benefits, it is interesting to note in the recent negotiations for a national labor contract that most of the things asked for by the unions have been a reality in HP Italiana for three or four years."

Quite a different story is told by Dick Love, director at YHP: "My first reaction to the question of how HP objectives and management style 'travel' was—not all that far in Japan. However, when you compare YHP with other Japanese companies, the HP philosophy becomes more evident here.

"In evaluating this, it's important to understand that Japan has a group-oriented society. For the individual to have motivations, ambition, seek recognition, or make decisions apart from the group is not only uncommon but looked upon with general disfavor. Yet, while YHP is basically group-oriented, in its own way it has adopted many of HP's philosophies by modifying them to suit society.

(continued)

“In the area of employee communication, for example, it is very important that everyone feel equally involved in decisions or problems, and receive the same information as other members of their group. YHP’s method of achieving this simultaneous group communication is for each supervisor and line leader to meet with their people early each morning for 10 or 15 minutes. Everyone gets a chance to hear what’s going on or to express an opinion.

“Then, once a month, the morning meeting is held for all employees together. At this meeting, Shozo Yokogawa, the company president, candidly discusses many current topics ranging from basic company philosophy to plans for the year ahead. This kind of communication is quite unusual in Japan. In fact, in most companies the employees will seldom see the president, let alone hear him speak on an informal basis.

“Another significant difference here is the accessability of management. One big company made news recently with the announcement of an ‘open door’ policy. Ours has been standard operating philosophy since YHP was founded 10 years ago.”

What do they say in Singapore?

Five HP Singapore employees with service ranging from one month to three years (old-timers!) were asked last month to express how they feel about their jobs, their supervisors, the company and its way of doing things.

Susan Lee in Manufacturing services commented on “the sympathetic understanding of work and personal problems by supervisors. They display a lot of trust in me . . .”

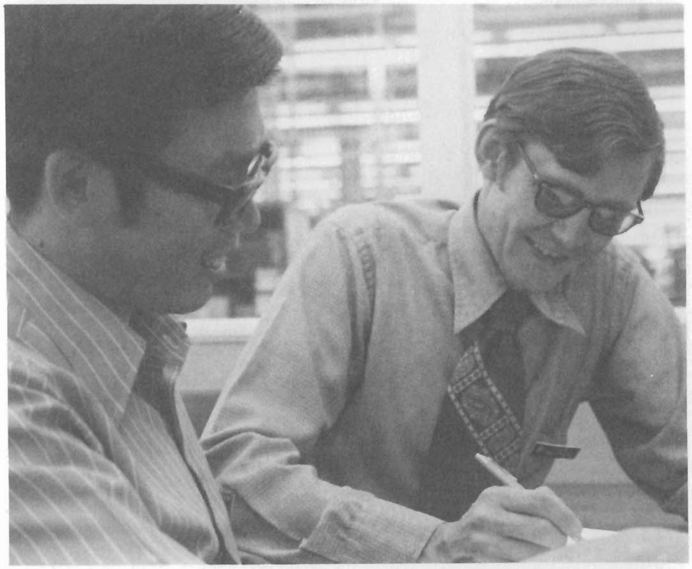
Other participants were Anna Wong of Memory, Jaswant Singh of Manufacturing Services, Mariyaee of H.C.D., and May Tan of Personnel. They noted that “As a whole, HP is a good place to work. In terms of pay it is one of the best.”

The company’s objectives have great appeal, they said, and there is no real reason why they would not work as well in Singapore as in the United States.

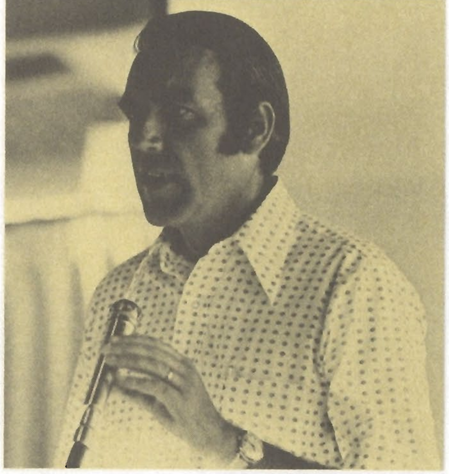
Overall, they felt the company was doing a good job of living up to these objectives by providing job security, recognizing individual achievement, offering advancement opportunities and training, and by its “open door” relations with schools and universities.

TODAY

Philip Tong, in personnel administration at HP Singapore, recently completed a round-the-world tour during which he literally sought to pin down that elusive thing known as “the HP way.” In the course of his journey he visited HP organizations in California, Colorado and Europe. *Measure* caught up with Philip in Loveland where he spent eight weeks. What else would he take back with him, along with more know-how in HP’s procedures for wage review, job evaluation and general employee relations? “My main impression is that of a great deal of concern for the individual — much more so than would be customary in Singapore. In the employee relations cases I sat in on, the participants really went that extra mile to be fair — without being soft. This is the way people ought to be treated. But if you have to rationalize it from the monetary point of view, it is still the right thing to do. Because it clearly contributes to a good attitude toward work which is beneficial to long-term productivity and profit.”

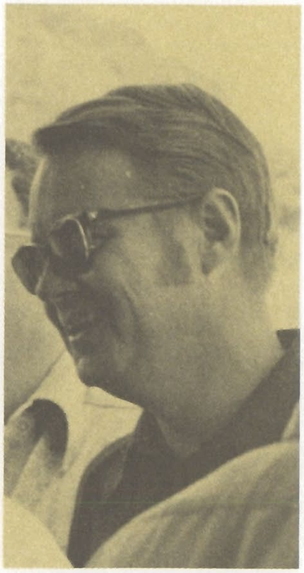


John Young



The HP experience

TOMORROW



Bill Terry

TODAY, MANY PEOPLE QUESTION THE CONCEPT that growth of a corporation or a community is a necessary or desirable goal. HP's fourth corporate objective recognizes this point in stating that large size as an end in itself is not important, but that growth is vital to a highly technological company in serving the needs of customers and society, and in creating the opportunities that attract good people. But having said that, are there not some hazards even when growth is purposeful? And here we are talking not about dangers to HP's corporate organization and its physical assets, but to its spirit, its management style, its attitudes, its "way"–whatever you want to call it.

In the opinion of the general managers of the four main product groups–John Young of Electronic Products, Bill Terry of Data Products, Dean Morton of Medical Electronic Products, and Emery Rogers of Analytical Products–there are indeed some challenges downstream.

One such challenge is that of maintaining a small-company atmosphere at the local level of every HP organization, even while developing the big-company activities essential to our overall marketing and technological capabilities.

Why is this important?

"Because there are more strengths in a big company," says John Young, "but more flexibility, enthusiasm, identity and interaction in a small independent activity. The difficulty is to find the balance point between these not necessarily compatible goals. We wrestle with this problem all the time, and as we get bigger the balance point does indeed change. But–successfully achieved–this synthesis brings about the best of all worlds."

Dean Morton recalled a recent visit to the HP sales office in Kenner, Louisiana. "It has less than 20 people," he said, "but I think if nobody told you, you still would recognize it as an HP office. In this respect, I think we have been unusually good at retaining the spirit and character of the company wherever we go.

"In our own case at MED, when we made a decision that we had to establish a new site–what is now the Andover site–we felt it was very important to give that operation an identity, an autonomy, and a product-line responsibility as quickly as possible, rather than make it just a satellite of Waltham.

"This, of course, is the essence of decentralization, but it is also one of the things that binds HP together. And I don't think that's a contradiction at all. The stronger we are locally the more cohesive we are as a corporation, because it's done within a community of interests and in an atmosphere of self-respect."

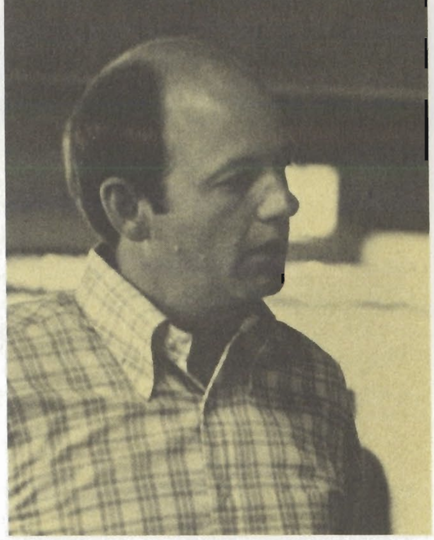
The special challenge for Data Products organizations was brought out by Bill Terry: "The new Boise site in Idaho is an example of separating the organization and not concentrating everything in one place. At the same time, there needs to be a very high degree of interaction. Unlike some electronic instruments such as scopes, displays and signal generators, products in the Data Systems area all have to interconnect and you have to get them to market at the right time. If you don't have a key peripheral product or current and reliable software, for example, you don't have a computer system to sell. So we are going to have to learn how to relate programs together without the 'luxury' of doing it all in one place."

Emery Rogers affirmed that "Size can be a threat–if it entails a proliferation of management and supervisory levels. But I think that HP is just as much a 'family' as it was when I joined in 1967, even though we're three times larger now. We've always kept the operating unit at a reasonable size, and people have been chosen to run these units who understand the HP way."

Is "the HP way" fundamentally sound regardless of the business environment?

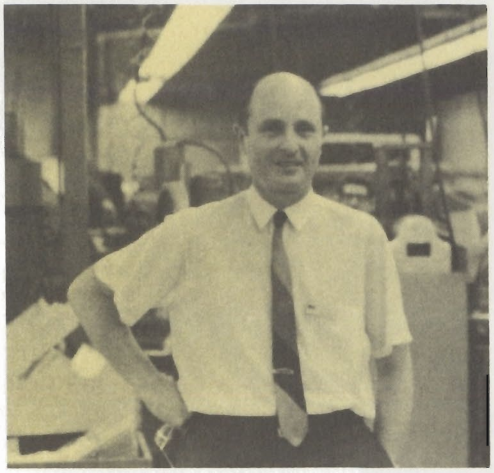
"You'll find some people who will tell you that you can't run a computer business the HP way," Bill Terry responded. "They say you just can't worry so much about some of the things we do concern ourselves about, such as profits, people, and obligations to the community. This is a different business, they say, too big, too fast growing and with too many tough competitors. And to stay with them you've got to concentrate completely on 'grow, grow, grow' if you want to be around tomorrow.

(continued)



Dean Morton

Emery Rogers



TOMORROW

"I just don't believe that. I don't think the computer business is fundamentally different from any other business. I think it is appropriate and not too risky for HP to say that we are going to be in the computer business on our own terms—that is, concerned with people, profits and the like.

"For example, Dave Packard for years has talked about self-financing as the sound way to run a business. The reason he does this is not from any narrow concern about money or against borrowing as such, but rather that paying your way as you go requires you to make fundamentally sound decisions in your planning."

Another challenge to management is management—finding the people who will manage the organizations of the future.

"It's a more broadly demanding assignment every year," said John Young. "The type of person who was a good manager 20 years ago isn't necessarily the fellow who would be successful today. The new manager must be extremely adaptive, able to be a team player in the midst of a heck of a lot of complexities, and yet still give strong leadership and direction.

"Where do we find them? Right here, in a variety of assignments in the organization. You can't predict future division managers by education, background, or by methods of testing for character, skill, or latent leadership qualities. The best way to identify and develop those who will provide the leadership for the future is by providing increased responsibilities in today's organization, backed up by good coaching or feedback from other managers."

In Bill Terry's view, "The art of getting things done through people is fairly simple when operations are small. As we become more complex organizations, as we are in Data Systems with interactive product lines and international markets, the art is to simplify lines of authority. We need to give people a clear sense of the objectives and a clearly defined responsibility they can understand.

"To bring this off we are going to have to develop a new breed of managers who will be able to manage on a multi-plant, multi-national, multi-product basis, yet provide all the traditional strengths of a local manager."

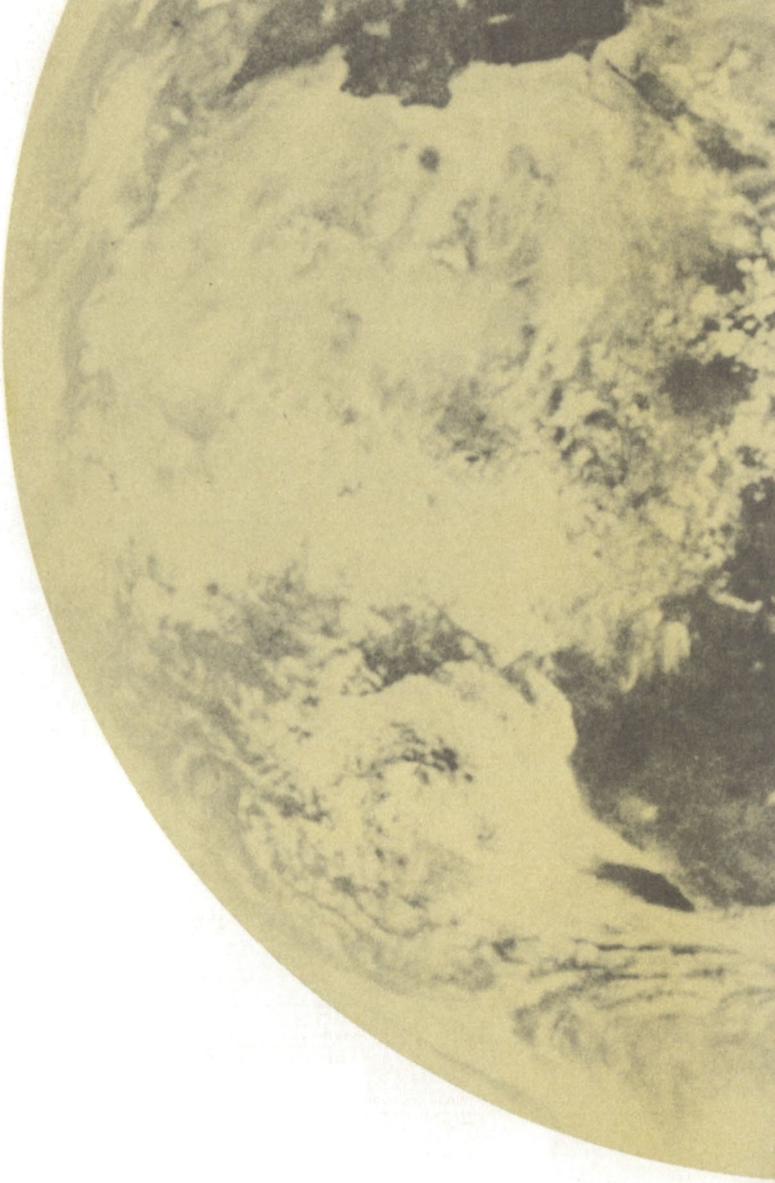
What about top management?

According to Emery Rogers, "One of the reasons HP has had success in maintaining its environment is the extraordinary lengths our top management is willing to go in fostering it. They seem to be on the move interminably, put in long hours each day, travel on the weekends, eat at odd hours—and thrive on it. Because of this, Bill Hewlett, Dave Packard, and the other top managers have a remarkable knowledge of what is going on, encompassing the entire range of activities of the company. But, after agreeing on the objectives, they get out of the way and let you do your job—even while showing their interest in what you do. You'll never find a more fundamental example of management-by-objective."

John Young noted that the ability of the HP way to continue over the long term is simply unknowable: "It's an attitude—a style of management that grew out of the attitude of the founders, and the decisions they have made. It feels right to those of us here now. Future boards of directors and chief executive officers will have a big influence on perpetuating these attitudes."

Bill Terry put the same thought another way: "The character of the company will live on if it is a fundamentally sound thing to do, and not just something Dave and Bill told us to do. But I don't worry about that. I think there are plenty of good people around who feel and are fundamentally dedicated to these philosophies just as strongly as Dave and Bill."

Dean Morton added, "The important thing now or in the future is the way people feel about their jobs. Do they have areas of freedom within which to work? Do they really feel responsible for what they do? Do they really feel a part of the organization, with a sense of vested interest and commitment? If we can continue to answer these questions positively, then people will continue to be involved with the company in a broad way. And HP will continue to be something different—not just another company."



Question to Barney Oliver, vice president-Research and Development:

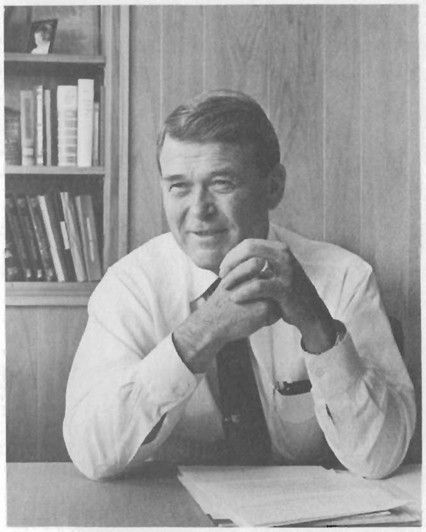
"In the past, the character of the company has rested in large part on the ability to make product contributions. Can we come up with the creative engineering and products ideas to perpetuate this relationship?"

Answer: "HP's past growth has resulted from a long series of technical contributions to the growing field of electronics. Not only has our market share increased, but the size of the market has also grown.

"Population increase is only part of the story. If zero population growth were achieved tomorrow, the electronics industry would continue to expand with new areas of application, many of which are just now being realized as a result of the cost and performance advantages of LSI.

"During the '70s I predict HP's engineering leadership will produce as significant contributions in these new areas as we have made in the past, and our growth will continue.

"In the '80s and '90s the picture is not as clear. As our oil supplies dwindle, new mobile energy sources will be needed. A tremendous engineering effort will be needed to convert to the hydrogen, or artificial hydrocarbon economy. Unless we anticipate some of these problems and help solve them, we may find ourselves outside the mainstream of technology as the century ends."



From the president's desk

It is estimated that by the end of this year 58 percent of the people at HP will have been with the company less than 18 months. Whereas this is an impressive growth figure, it also poses some real problems.

Any group of people who have worked together for some time, any organization of long standing, indeed, any state or national body over a period of time develops a philosophy, a series of traditions, a set of mores. These, in total, are unique and they fully define the organization, setting it aside for better or worse from similar organizations. At HP all of this goes under the general heading of "the HP way." I want to emphasize that the "HP way" cannot be demonstrated to be unique, and that although based on sound principles, it is not necessarily transplantable to other organizations. But what can be said about it is that it has worked successfully in the past at HP and there is every reason to believe that being a dynamic "way," it will work in the future. If this is true, and if it differs from more conventional practices, then it is important that whatever this "way" is that it be conveyed to, and understood by, this very large body of new HP people.

What *is* the HP way? I feel that in general terms it is the policies and actions that flow from the belief that men and women want to do a good job, a creative job, and that if they are provided the proper environment they will do so. But that's only part of it. Closely coupled with this is the HP tradition of treating each individual with consideration and respect, and recognizing personal achievements. This sounds almost trite, but Dave and I honestly believe in this philosophy and have tried to operate the company along these lines since it first started.

What are some examples of this application of a confidence in and concern for people? One was a very early decision that has had a profound effect on the company. That decision was that we did not want to be a "hire and fire" operation—a company that would seek large contracts, employ a great many people for the duration of the contract, and at its completion let these people go. Now, there is nothing that is fundamentally wrong with this method of operation—much work can only be performed using this technique—it's just that Dave and I did not want to operate in this mode. This one early decision greatly limited our freedom of choice and was one of the factors that led us into the business in which we are now engaged.

There are a number of corollaries to this policy. One is that employees should be in a position to benefit directly from the success of the organization. This led to the early introduction of a profit-sharing plan, and eventually to the employee stock purchase plan. A second corollary was that if an employee was worried about pressing problems at home, he could not be expected to concentrate fully on his job. This, and the fact that in the early days Dave and I were very closely associated with people throughout the company and thus had a chance to see firsthand the devastating effect of domestic tragedy, led, amongst other things, to the very early introduction of medical insurance for catastrophic illness.

As the company grew and it became evident that we had to develop new levels of management, we applied our own concept of management-by-objective. When stripped down to its barest fundamentals, management-by-objective says that a manager, a supervisor, a foreman given the proper support and guidance (that is, the objectives), is probably better able to make decisions about the problems he is directly concerned with than some executive way up the line–no matter how smart or able that executive may be. This system places great responsibility on the individual concerned, but it also makes his work more interesting and more challenging. It makes him feel that he is really part of the company, and that he can have a direct effect on its performance.

Another illustration of the HP way occurred in 1970. During that time, orders were coming in at a rate less than our production capability. We were faced with the prospect of a 10 percent layoff–something we had never done. Rather than a layoff, we tried a different tack. We went to a schedule of working nine days out of every two weeks–a 10 percent cut in work schedule with a corresponding 10 percent cut in pay for all employees involved in this schedule. At the end of a six-month period, orders and employment were once again in balance and the company returned to a full work week. The net result of this program was that effectively all shared the burden of the recession, good people were not turned out on a very tough job market, and, I might observe, the company benefitted by having in place a highly qualified work force when business improved.

The dignity and worth of the individual is a very important part of the HP way. With this in mind, many years ago we did away with time clocks, and more recently we introduced the flexible work hours program. Flexible, or gliding, time was originated within the company at our plant in Germany. Later it was tried for six months or so at the Medical Electronics Division in Waltham, and then this year made available throughout much of the company. Again, this is meant to be an expression of trust and confidence in HP people as well as providing them with an opportunity to adjust their work schedules to their personal lives.

Many new HP people as well as visitors often note and comment to us about another HP way–that is, our informality and our being on a first name basis. Both Dave and I believe we all operate more effectively and comfortably in a truly informal and personal name atmosphere. Hopefully, with increasing growth we can retain this "family" way of operating with the minimum of controls and the maximum of a friendly, "help each other," attitude.

I could cite other examples, but the problem is that none by themselves really catch the essence of what the HP way is all about. You can't describe it in numbers and statistics. In the last analysis it is a spirit, a point of view. It is a feeling that everyone is a part of a team, and that team is HP. As I said at the beginning, it is an idea that is based on the individual. It exists because people have seen that it works, and they believe in it and support it. I believe that this feeling makes HP what it is, and that it is worth perpetuating.

Bill Hewlett

...but not least

The Hewlett-Packard Corporate Objectives

1. **PROFIT**
   OBJECTIVE: *To generate the highest level of profit consistent with our other objectives.*

2. **CUSTOMERS**
   OBJECTIVE: *To provide products and services of the greatest possible value to our customers.*

3. **FIELDS OF INTEREST**
   OBJECTIVE: *To enter new fields when the ideas we have, together with our technical, manufacturing and marketing skills, assure that we can make a needed and profitable contribution to the field.*

4. **GROWTH**
   OBJECTIVE: *To let our growth be limited only by our ability to develop and produce technical products that satisfy real customer needs.*

5. **OUR PEOPLE**
   OBJECTIVE: *To help HP people share in the company's success, which they make possible; to provide job security based on their performance; to recognize their individual achievements; and to insure the personal satisfaction that comes from a sense of accomplishment in their work.*

6. **MANAGEMENT**
   OBJECTIVE: *To foster initiative and creativity by allowing the individual great freedom of action in attaining well-defined objectives.*

7. **CITIZENSHIP**
   OBJECTIVE: *To honor our obligations to society by being an economic, intellectual and social asset to each nation and each community in which we operate.*

Measure

EDITOR
Gordon Brown

ART DIRECTOR
Tom Martin

CONTRIBUTING EDITORS — AMD, Karen Langford • AVONDALE, Matt Whittier • COLORADO SPRINGS, Barbara Dutcher • CUPERTINO, Jake Crawford • EASTERN SALES, Ellen Dericks • HPA, Jean Ewings • HP BENELUX, Amsterdam, Hans Vinkenoog • Brussels, Yvette Andre • HP CANADA, Ian Jackson • HP FRANCE, Jacques Brugere • HP GmbH, Rudi Speier • HP LTD., South Queensferry, Norma Raiment • Slough, Lynda Jones • HP SCANDINAVIA, Sid Mann • HP SINGAPORE, Philip Tong • HPSA, Josette Boulmier • HP VGmbH, Fred Goedel • LOVELAND, Pete Peterson • MANUFACTURING, Tom Lowden • MED, Janet Dale • MIDWEST SALES, Helen-Marie Boesche • MOUNTAIN VIEW, Ed Ilgen • NEELY SALES, Bob Reade • NEW JERSEY, Merium Lorenz • SAN DIEGO, Marshall Hiner • SANTA CLARA, Mollie Corya • SANTA ROSA, Jack Grout • SOUTHERN SALES, Atlanta area, Delores DeGraff • Texas area, Helen Hobson • STANFORD PARK, Joanne Engelhardt • YHP, Yoshiharu Okada

1501 Page Mill Road, Palo Alto, California 94304

HEWLETT-PACKARD COMPANY
1501 Page Mill Road
Palo Alto, California 94304

BULK RATE
U.S. POSTAGE
PAID
PALO ALTO, CALIF.
PERMIT 137

KENNETH L MACY
2320 SOMERSET AVENUE
CASTRO VALLEY, CA. 94546